

**S p e c i f i c a t i o n**

Be It Known That I, **DIANE M. IANNUZZI** a citizen of the United States of America, resident of San Diego, County of San Diego, State of California, have invented a new and useful

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**CIGARETTE SUBSTITUTE**

of which the following is a specification:

### Prior Application

This claims the benefit of U.S. Provisional Patent Application Serial Number 60/393,308 filed July 2, 2002.

### Field of the Invention

This invention relates to smoking articles and more particularly to smoking device substitutes for aiding in the breaking of the smoking habit.

### Background of the Invention

Inhalation devices for simulating the look, feel and flavor of smoking articles are known in the art. U.S. Patent No. 3,683,936 O'Neil, Jr. discloses an ingenious cigarette substitute capable of releasing flavors, fragrances, aromas, and other odors upon inhalation therethrough from substances encapsulated into microcells that can be conveniently broken by compression of the article. The aforesaid patent is specifically incorporated into this specification by this reference. The disclosure, however, still teaches the use of combustible material and the generation of smoke whose inhalation might be detrimental to the health of the user.

The instant invention results from an attempt to develop a look-alike and feel-alike substitute for cigarettes that does not carry any of the hazardous effects associated with the smoking of tobacco.

### Summary of the Invention

5 The principal and secondary objects of this invention are to provide a non-burning, look-alike and feel-alike substitute for cigarettes which provides for inhalation of smokeless aroma normally associated with burning tobacco and the blowing out of similarly aromatized smoke without any smoke or nicotine being absorbed by the user.

10 These and other valuable objects are achieved by a cigarette substitute comprising a tubular enclosure commensurate with the size of an ordinary cigarette. A first chamber in the enclosure is lined with a paper upon which has been applied a scratch-released flavored compound. A second chamber is filled with a powder that comes out of the article in a smoke-like cloud when the user blows  
15 through the article. Check-valves mounted in directionally opposite arrangement in the inlet or outlet ports of the chambers prevent the inhalation of the powder. The aromatic substance is released by scratching the lining of the first chamber with a built-in wire brush. The powder is contained  
20 within the thread of an helicoidal spline running through the second chamber. The aromatic compound is preferably deposited upon the lining paper in the form of parallel beads or as a single helicoidal bead in order to increase the exposed surface area.

### Brief Description of the Drawing

25 Figure 1 is a cross-sectional view of the cigarette

substitute implement according to the invention;

**Figure 2** is a perspective view of the aromatic compound-depositing pattern; and

**Figure 3** is a schematical cross-sectional view of an alternate aromatic compound-depositing method.

#### Description of the Preferred Embodiment of the Invention

Referring now to the drawing, there is shown in Figure 1, a cigarette substitute 1 which comprises a tubular enclosure or vessel 2 having the shape and dimension of an ordinary cigarette. The outside of the vessel is preferably coated or lined with a white, paper-like material 3 for improved realism. A paper filter 4 is mounted on the proximal end of the enclosure. The purpose of this filter is dual. First, it prevents specks of saliva that might be blown by the user from entering the vessel. Secondly, it prevents loose particles of debris within the enclosure from being inhaled by the user. At the opposite distal end or terminus of the enclosure, is mounted a fine mesh grid 5 shaped unevenly to give the appearance of ash. The interior passageway of the enclosure is divided into two chambers. The first chamber 6 proximal to the filter is lined with a sheet of paper 7 upon which has been deposited an aromatic substance evocative of the smell of burning tobacco. The aromatic substance is either coated by an easily scratchable sealing layer. Alternatively, the aromatic substance may be encapsulated in micro-cells of the type disclosed in the

incorporated U.S. Patent No. 3,683,936. A wire brush implement 9, not unlike a miniature bottle brush, is packaged in the center of the first chamber 6. The brush has a long, axially oriented handle 10 at the distal end of which sets of bristles 11 and are shaped and dimensioned to contact the sealing coat of the aromatic material 8. The proximate end 12 of the handle extends through the filter 4 and is thereby slidingly and rotatively mounted by the same so that the brush can be manipulated and translated axially over the entire length of the first chamber. During such maneuver, the bristles 11 abrasively rub against the aromatic material 8. One or more inlet ports 13 bored through the wall of the first chamber are controlled by check-valves 14 constituted by small flaps of paper overlapping the aperture of the inlet ports. The unidirectional flow check-valves are positioned to allow only air to penetrate the chamber and to prevent exit.

Accordingly, the tobacco smoke-simulating aroma contained in the substance lining the first chamber can be conveniently released by scratching the coating layer through manipulation of the small knob 15 that protrudes on the external side of the filter 4 at the end of the handle 10. The second chamber 16 occupies the distal half of the enclosure. It contains an helicoidal spline 17 which axially spans the entire length of the chamber. The septum 18 that divides the two chambers is pierced by a small opening 19 controlled by a unidirectional flow check-valve

20 which only allows air blown through the first chamber to enter the second one. A fine powder 21 such as talc, diatomaceous earth or other micrometric powder is packed between the coils of the spline 17.

5 Accordingly, air blown by the user into the device will be prevented from exiting through the intake port of the first chamber, but will pass through the second chamber carrying with it a small volume of the powder 21 out of the device through the grid 5. The check valve 20 prevents any  
10 of the powder from being sucked into the first chamber.

It should be noted that the successive arrangement of the chambers is not critical. They could be coaxially disposed within the enclosure.

15 It should also be noted that the wire brush 9 can be provided apart from the substitute and the filter 4 eliminated. Further, the wire brush could be replaced altogether by a layer of abrasive paper as disclosed in the referenced and incorporated patent. In which case, the walls of the first chamber will be made pliable and flexible  
20 to allow the breaking up of the protective layer or capsule by abrasive contact of the materials.

25 In order to maximize the surface area of the aromatic substance, the material is preferably deposited in successive thinned and thickened portions in the form of parallel and adjacent beads as illustrated in Figure 2. Alternately, a single helicoidal bead 23 can be formed by moving the nozzle 24 of an aromatic substance sprayer within

a tubular paper enclosure 25 in a rotating and axially translating movement illustrated by the arrows 26 and 27.

While the preferred embodiments of the invention have been described, modifications can be made and other  
5 embodiments may be devised without departing from the spirit of the invention and the scope of the appended claims.

**WHAT IS CLAIMED IS:**

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